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Net Cost: How Much Do Students Really Pay for College?

By Jacqueline E. King and Kenneth E. Redd

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Increasingly, the media, parents and students, and policy-makers are asking how much students must pay to attend college after financial aid is taken into account. We present four ways to calculate net cost and we discuss the merits and drawbacks of each net cost calculation. The results suggest that college remains affordable for most students.

ach year, the College Board releases two reports on student financing from its Annual Survey of Colleges and *Trends in Student Aid*. In 1995, these reports were released together at a press conference in Washington, D.C. Several reporters at this meeting expressed frustration that the information provided did not measure the net cost of college. The general reaction was that, while it is important to know "sticker prices" and total aid awarded, the most important information is how much students actually have to pay, net student aid, to attend college.

The 1993 National Postsecondary Student Aid Study (NPSAS:93) makes it possible to answer this question. The National Center for Education Statistics (NCES), which sponsors NPSAS, already has released net cost estimates derived from NPSAS in *The Condition of Education* (U.S. Department of Education 1995). We were struck by what we believed were the Department of Education's rather high estimates of net cost for low-income students. We also recognized that these figures would not be seen by the press or, for the most part, by the members of our respective associations. We decided to use NPSAS to create estimates of net cost that could be easily understood by the general public.

Here we describe the process we used to arrive at our estimates of net cost and the definitional questions we debated throughout that process. We also discuss some of the political and communications issues inherent in trying to provide the media and the general public with a simple set of figures that estimate the average amount students *really* must pay to attend college.

Net cost analysis is fraught with difficulties. It is virtually impossible to accurately portray the varying costs of attending college for the vast variety of college students. However, producing the best estimates possible has become essential, both at the national level and for individual campuses, for several reasons. First, if we do not present net cost estimates, the press will continue to talk and write only about sticker prices, thus overestimating the cost of postsecondary education for many students and their families.

Further, the press and the public are no longer willing to accept our protests that estimates of net cost are simply "too complicated" to produce. Public and media attention on college costs is becoming political, both in the states and in Washington.

While it would be irresponsible and inaccurate to argue that college costs have not spiraled in recent years, it is essential that we in higher education place the issue in the proper perspective for policy-makers. What we face is probably better defined as a college affordability *problem* rather than a *crisis*, and one way of influencing how our various constituents—the public, press, and policy-makers—view college affordability is through a careful analysis of net cost.

Methodology

The results of NPSAS:93 are based on survey responses from approximately 78,000 postsecondary education students, statistically weighted to represent the 18.5 million students who attended college in academic year 1992-93. Students and postsecondary institutions provided information on students' total financial aid from all sources (federal, state, institutional, other) and on their educational costs. In addition, data for NPSAS were provided from a variety of other sources, such as students' financial aid forms and telephone interviews with students and their parents.

To measure the net cost of attending postsecondary education paid by students, we used the NPSAS Data Analysis System (DAS). The DAS allowed us to examine net costs by students' institutional types, income levels, attendance status (full-time and part-time), and financial dependency status (dependent and independent). The DAS contains information for undergraduate and graduate students. However, our study looks only at undergraduates, since federal and state policy-makers and the media have focused most of their attention on the financial circumstances of these students.

The DAS provides eleven different variables that estimate students' net costs. These variables are based on students' attendance status and on different measures of postsecondary educational costs (institution-reported costs and student-reported costs). These variables also use different measures of higher education expenses to calculate net costs; some use total expenses (tuition and mandatory fees, books and supplies, living expenses, and other miscellaneous expenses incurred while enrolled), while others use only tuition and fees.

These different variables allow us to compare net costs for students with widely different educational circumstances and educational costs. That is, we were able to compare the net costs of financially dependent students enrolled full-time with the net costs of independent students enrolled part-time. About 64% of the financially dependent students were enrolled full-time, while 70% of the independent students were enrolled part-time. Therefore, we decided to focus our analysis only on full-time dependent students and part-time independent students.

We also wanted to compare the net costs of students by their income levels. The DAS contains several different income variables — including total income (taxable and non-taxable income from all sources), adjusted gross income (AGI), and employment earnings. We decided to use the total income variable, since the AGI information may not have been available for students who did not apply for financial aid during the academic year, and since employment earnings data would not have been available for students who did not work during the academic year. We also assumed that, at least for some students, a

portion of the income generated from sources other than earnings (such as income from assets) might have been used to pay a portion of college costs. The total income data are for calendar year 1991, the most recent year of income available for students who began postsecondary education in the fall of 1992. However, we did not include students whose income was not known (total income amounts were missing for about 4% of the students).

Net Cost Scenarios

Our analysis led us to consider and reject several definitions of net cost. These can be summarized in four net cost scenarios. These scenarios illustrate how our thinking evolved as we refined our definition of net cost to apply to the broadest range of college students, regardless of dependency status and living arrangement.

The first net cost scenario, developed by the National Center for Education Statistics, is based on student-reported total educational expenses minus total student aid. As part of NPSAS, students were asked in a telephone interview to estimate the total amount they spent to attend college, including tuition and fees, books and supplies, and all living expenses. The financial aid amounts were taken, whenever possible, from institutional records. These aid amounts include "self-help" aid such as loans and work-study, but do not include loan subsidies. This analysis was conducted only for full-time, dependent undergraduates.

The results of this analysis are displayed in Table 1. We modified the NCES figures somewhat by using a specific income figure rather than income quartiles to define low-income students. We considered all students from families with total income of less than \$20,000 to be low income; about 15% of the dependent undergraduates came from these families. We also added proprietary institutions to the analysis. Otherwise, we used the same NPSAS variables for cost and financial aid.

We were surprised at how high the estimates were for low-income students and skeptical of the accuracy of student estimates of their total costs. We hypothesized that the cost estimates would decrease if *institution-reported*

TABLE 1 Net Cost Scenario One: Student-Reported Total Cost Less Total Aid

	All Full-Time Dependent Undergraduates	Income Under \$20,000
Public Two-Year	\$ 6,848	\$5,091
Public Four-Year	8,236	5,414
Private, Non-Profit Four-Year	13,168	7,030
Proprietary	9,218	6,960
ALL INSTITUTIONS	\$ 9,331	\$5,888

Note: In all tables "All Institutions" includes private, non-profit two-year institutions.

student budgets, adjusted for students' attendance status, were substituted. We also decided that it would be important from a public information standpoint to produce estimates for independent students as well. Since nearly 70% of financially independent undergraduates studied part-time, we decided to produce our net cost estimates for part-time independent undergraduates, as well as full-time dependent students. Because independent undergraduates gener-

TABLE 2 Net Cost Scenario Two: Institution-Reported Total Cost Less Total Aid

	Full-Time Dependent Undergraduates	Income Under \$20,000
Public Two-Year	\$ 6,639	\$ 5,260
Public Four-Year	7,778	4,827
Private, Non-Profit Four-Year	12,411	6,306
Proprietary	9,580	8,113
ALL INSTITUTIONS	\$ 8,875	\$ 5,531
	Part-Time Independent Undergraduates	Income Under \$10,000
Public Two-Year	\$ 4,016	\$ 5,045
Public Four-Year	5,519	5,099
Private, Non-Profit Four-Year	5,951	5,887
Proprietary	8,063	8,225
ALL INSTITUTIONS	\$ 4,733	\$ 5,391

TABLE 3 Net Cost Scenario Three: Tuition and Fees Less Total Grants

	Full-Time Dependent Undergraduates	Income Under \$20,000
Public Two-Year	\$ 633	(\$ 377)
Public Four-Year	2,148	32
Private, Non-Profit Four-Year	8,085	3,057
Proprietary	5,419	3,930
ALL INSTITUTIONS	\$3,590	\$1,066
	Part-Time Independent Undergraduates	Income Under \$10,000
Public Two-Year	\$ 165	(\$ 378)
Public Four-Year	755	162
Private, Non-Profit Four-Year	2,473	2,038
Proprietary	3,570	2,688
ALL INSTITUTIONS	\$ 696	\$ 248

Note: Figures in parentheses indicate that net cost is less than zero. Average grant aid greater than average tuition and fees.

ally have lower incomes than dependent students, we used a lower figure to define these students as low-income. About 15% of the independent students had total income of less than \$10,000.

Table 2 details the results of our second net cost estimation, which is based on institution-reported total cost minus total financial aid. While the net cost estimates generally decreased when institution-reported total cost was substituted for the student-reported figure, the change is not dramatic. On average, students' estimates of their total costs varied little from the estimates institutions used to create their student budgets.

We also noted that, in several instances, average net costs for low-income independent students were higher than for all independent students. For example, average net costs for low-income independent students who attended four-year and two-year public colleges were slightly higher than the average for all such students at these institutions. This difference may exist because low-income independents might have taken more courses on average than all independents. The relatively few students at these institutions whose total costs were exceptionally high may also cause this anomalous result; these students might skew the data.

Average net cost to low-income students, as measured in this scenario, varied little among public and private, non-profit institutions. The total range of net costs for low-income dependent students was approximately \$1,500. For low-income independents, the range was even narrower. These results suggest that low-income students paid a fairly consistent amount to attend college, regardless of which type of institution they attend.

This net cost scenario led us to question the use of total cost. We wondered how part-time independent students might partition their educational costs from their general living expenses. For example, if an independent student must drive to work every day, should her transportation costs be counted as part of the cost of attendance when she only drives to class at the local community college one or two nights per week? On a broader level, we also questioned the extent to which institutions or students can accurately estimate these living expenses, especially for students who live off-campus. Given the broad array of student living arrangements, cost of living differences across the country, and the difficulty of separating educational from general living expenses, we decided to concentrate our analysis on the costs required for entry into post-secondary education—tuition and mandatory fees.

Once we decided to use tuition and fees in our net cost estimates, we also began to question the inclusion of "self help" in our definition of total aid. By including only grants in our calculation of net cost, we are able to provide a more accurate estimate of the discount on tuition. Table 3 summarizes this analysis.

Using this definition, we were able to determine the amount students paid through prior income, savings, work, or loans to pay tuition. Table 3 shows that, for low-income dependent and independent students, net tuition costs at public institutions in 1992-93 were minimal. Indeed, at public two-year colleges (community colleges), a small amount of grant money was available to pay living costs. If one considers tuition the basic "barrier to entry" for

"What we face is better defined as a college affordability problem rather than a crisis." attending college, then grants essentially remove this barrier for low-income students at public institutions.

For all dependent full-time undergraduates, tuition and fees at independent institutions averaged \$11,872. Average grant aid for these students was \$3,782. For low-income dependents, tuition averaged \$9,376 and grants averaged \$6,319. Independent part-time students did not receive nearly as much assistance, most likely due to their part-time status. Low-income independents received an average of \$2,040 in grant aid at private four-year institutions. Nonetheless, grant aid essentially reduced the average tuition bill by 50% for low-income, independent students at private colleges.

Students at proprietary institutions averaged the highest net tuition, perhaps because these institutions charged relatively high tuition and offer little institutional grant aid to augment federal grants. Interestingly, there was almost no difference in the average amount of grant aid full- and part-time low-income students received at proprietary institutions. Low-income full-time dependents averaged \$2,026 in grant assistance, while low-income part-time independents received \$1,868.

This analysis is very instructive for demonstrating in a simple way the extent to which students can expect to be helped by grant assistance. However, we felt that it still did not address the original question of how much "out of pocket" money students and families must produce to attend college. To answer this question, we decided to calculate tuition less *total aid*. Because this variable is not included in the NPSAS Data Analysis System, we calculated the figures by subtracting the average tuition and fee amounts for students in each income category and institutional type from the average amounts of total financial aid. The results of this analysis are displayed in Table 4.

"The actual cost of college is much lower than the listed cost for the overwhelming majority of students."

TABLE 4 Net Cost Scenario Four: Tuition and Fees Less Total Aid

	Full-Time Dependent Undergraduates	Income Under \$20,000
Public Two-Year	\$ 438	(\$ 824)
Public Four-Year	1,073	(1,853)
Private, Non-Profit Four-Year	5,745	11
Proprietary	2,324	1,163
ALL INSTITUTIONS	\$2,255	(\$ 960)
	Part-Time Independent Undergraduates	Income Under \$10,000
Public Two-Year	(\$ 71)	(\$ 879)
Public Four-Year	(6)	(1,677)
Private, Non-Profit Four-Year	1,559	43
Proprietary	2,078	864
ALL INSTITUTIONS	\$ 206	(\$ 908)
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The figures in Table 4 are very encouraging. They indicate that, on average, financial aid awards in 1992-93 covered the basic barrier to entry—tuition and fees—for students at public and private, non-profit institutions and that, at public institutions, they also provided some funds to cover living expenses. Of course, work and loans are not gift aid; wages must be earned and loans must be repaid. Clearly, it would be preferable that more aid were in the form of grants, especially for those students who are economically disadvantaged. Nonetheless, on average, low-income students paid little or nothing to register for classes at public and private, non-profit colleges.

Of course, most students must either live on or commute to a campus, and they all need to pay for food, clothing, and the other necessities of life. However, it is often overlooked that, with the exception of extra commuting costs, books and supplies, most of these costs of living would be present regardless of whether or not an individual chooses to attend college. Costs of food, shelter, and clothing might be higher or lower in college than if students were not enrolled, but they would be present.

Is Financial Aid a Barrier to Entry?

The fact that financial aid appears to eliminate the "barrier to entry" for many low-income students, and covers much of the tuition and fee costs for students generally, is encouraging. However, we should note several cautions to this analysis. First, and most important, is that the NPSAS results are based on financial aid and college costs information available before the 1992 Reauthorization of the Federal Higher Education Act. Since college costs, federal financial aid programs, and the amount of state legislatures' support for college students and institutions have changed dramatically since 1992-93, it is possible that a later analysis of net costs would be radically different from the results shown here.

While, in general, student aid may eliminate the barrier to entry for low-income students, the type of aid offered may create impediments. We are especially concerned with the high number of student loan borrowers, particularly those from low-income families. At two-year pubic colleges, for example, nearly 13% of the dependent students from low-income families borrowed, compared to 52% of those at four-year public colleges, and 59% at four-year private, non-profit colleges. While borrowing helped to reduce these students' net costs, in the long run the loan repayments might cause these borrowers to face financial difficulties after they leave postsecondary education. And it is very likely that the number of borrowers from low-income families has increased dramatically since 1992-93.

We also do not wish to imply that tuition is the only educational cost students and their families must consider. For many students, living costs and costs for books and educational supplies can be daunting—especially for students with families or other financial responsibilities. However, the results do suggest that financial aid pays a large portion of the most basic costs and, for low-income students, pays some share of living and other costs as well.

Our results also suggest that students have choices for further reducing their net costs. Since financial aid appears to cover a good portion of tuition costs, and much of the out-of-pocket expenses are for living costs and other expenses, students and their families apparently have some flexibility and discretion to control these costs. This is especially true of financially dependent students, who may be able to reduce some portion of their living expenses while they are enrolled. Independent students probably have less flexibility, since their living expenses are more likely to be fixed while they are enrolled. However, for most of these students, these expenses would exist even if they were not in college.

This analysis gives evidence that financial aid programs have had some success in providing access to postsecondary education for low-income students. On average, financial aid awards for these students do cover a substantial share of the cost of tuition and fees at public and private, non-profit colleges. It is even more encouraging that many low-income undergraduates apparently were able to attend at least a community college with only grant aid, and did not need to borrow to pay their tuition and fees.

However, while grant aid, combined with low tuition, appears to have significantly reduced the net cost to enter community colleges, enrolling at other types of institutions appears to require some level of borrowing or other "self-help" aid for many students, especially low-income undergraduates. Even after excluding non-tuition-related expenses, many students must borrow to meet the cost of college enrollment.

Despite these concerns, the NPSAS data do provide basic measures of how much students *really* must pay to enroll in college. These measures show that, for the overwhelming majority of students, the actual cost of college is much lower than the listed costs. Financial aid, particularly grant aid, continues to play a vital role in reducing the out-of-pocket costs of college. These results should provide some comfort to policy-makers, the press, college students, and parents as they continue to express concern over the rising "sticker price" of college.

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